Contracts to Be Let

Bids received until June 1, 1915.

Repairing Fassett St. Bridge

Toledo, Ohio.

Sealed Proposals will be received by the Director of Public Service at Room 223 The Valentine Bldg., until Twelve o'clock noon, Standard Time, Tuesday, June 1, 1915, for furnishing the necessary labor and material for the repairing, strengthening and repaving of the Fassett Street Bridge in the City of Toledo, Ohio, in accordance with plans on file in the office of the Chief Engineer of the Department of Public Service.

Each bid must contain the full name of every person or company interested in the same and must be accompanied by a surety company bond in a sum equal to 25 per cent. of the approximate estimated cost of the work or a certified check on some solvent bank, to the satisfaction of the Director of Public Service, as a guarantee that if the bid is accepted a contract will be entered into and its performance properly secured. Should any bid be rejected, such checks will be forthwith returned to the bidder, and should any bid be accepted, such check will be returned upon the proper execution and securing of the contract. The Director of Public Service reserves the right to reject any and all bids. All bids must be written in ink, and the total price for each item shall be written out in words. All labor and material necessary for the improvement aforesaid shall be bid on separately, with the price thereof, and total written in as aforesaid. Bidders will be required to indorse their names on the outside of the envelope containing their proposals and what the bid is for, the same to be filed with the Secretary to the Director of Public Service. Bidders are required to use the printed forms and envelopes which can be obtained at the office of the Chief Engineer of the Department of Public Service. Plans and specifications can be seen at the office of the Director of Public Service or at the office of the said Chief Engineer. By order of

A. W. BOARDMAN, Director of Public Service.

C. BURTON NICKELS, Secretary.

Bids received until May 25, 1915.

Sewerage System

Rittman, Ohio.

Sealed proposals will be received by the Clerk of Council at Rittman, Ohio, in the Council Chamber, until 1 o'clock P.M., Central Standard time, of the 25th day of May, 1915, and then publicly opened and read, for the construction of a Sewerage System for certain portions of the Village of Rittman, Ohio.

The work to be done includes the construction of approximately 5.36 miles of vitrified pipe sewers, ranging in size from 6 to 15 inch, to be located on the several streets and thoroughfares and private right-of-ways in the Village.

Bids will be made upon the work as a whole.

Copies of the plans, proposal forms, specifications, and forms of bonds and contract can be seen at the office of the Clerk of Council, Rittman, Ohio; or may be obtained by prospective bidders upon depositing Ten Dollars ($10.00) with W. F. Peters, Engineer, Medina, Ohio, or R. Winthrop Pratt, Consulting Engineer, Hippodrome Bldg., Cleveland, Ohio, which sum will be refunded on the return of plans and specifications within ten (10) days after the contract is awarded, if same are in good condition when returned.

The contract bond will be for fifty (50%) per cent. of the amount of the contract.

Each proposal shall be accompanied by a certified check for ten (10%) per cent. of the amount of proposal, or by a bond with surety or sureties satisfactory to the Village Council.

The Village Council reserves the right to reject any or all bids, waive any informalities in the bids received and to accept any bid which it deems most favorable to the Village of Rittman, Ohio.

By Order of the Village Council.

VANCE HICKIN, Clerk.

Bids received until June 1, 1915.

Highway Work

OFFICE OF THE STATE COMMISSION OF HIGHWAYS.

Albany, N. Y.

Sealed proposals will be received by the undersigned at their office, No. 55 Lancaster Street, Albany, N. Y., at 1 o'clock p.m. on Tuesday, the 1st day of June, 1915, for the repair of highways in the following counties:

Albany (one contract—surface treatment); Chenango (two contracts—surface treatment); Clinton (one contract—surface treatment); Cortland (one contract—surface treatment); Delaware (one contract—surface treatment); Erie (one contract—surface treatment); Essex (two contracts—surface treatment); Fulton (one contract—surface treatment); Herkimer (one contract—surface treatment); Jefferson (one contract—surface treatment); Madison (one contract—surface treatment); Monroe (one contract—surface treatment); Montgomery (two contracts—surface treatment); Orange (one contract—surface treatment, one contract—resurfacing); Otsego (one contract—surface treatment); Rensselaer (two contracts—surface treatment); St. Lawrence (one contract—surface treatment, one contract—resurfacing); Saratoga (one contract—surface treatment); Schenectady (one contract—surface treatment); Schoharie (one contract—surface treatment); Steuben (one contract—resurfacing); Sullivan (one contract—surface treatment); Warren (one contract—resurfacing and surface treatment); Washington (one contract—surface treatment).

Maps, plans, specifications and estimates may be seen and proposal forms obtained at the office of the Commission in Albany, N. Y., and also at the office of the Division Engineers in whose divisions the contracts are to be repaired. The addresses of the Division Engineers and the counties in which they are in charge will be furnished on request.

The especial attention of bidders is called to "Information for Bidders" in the itemized proposal, specifications and contract agreement.

EDWIN DUFFEY, Commissioner.

I. J. MORRIS, Secretary.

Bids received until May 25, 1915.

Sewage Treatment Plant

Rittman, Ohio.

Sealed proposals will be received by the Clerk of Council at Rittman, Ohio, in the Council Chamber, until 1 o'clock P.M., Central Standard time, of the 25th day of May, 1915, and then publicly opened and read, for the construction of a Sewage Treatment Plant for the Village of Rittman, Ohio.

The work to be done includes the construction of a pump station with electric driven centrifugal pumps, concrete sedimentation and dosing tanks, 1.25 acres of intermittent sand filters and an earth dike.

Bids will be made upon the work as a whole.

Copies of the plans, proposal forms, specifications, and forms of bonds and contracts can be seen at the office of the Clerk of Council, Rittman, Ohio; or may be obtained by prospective bidders upon depositing Ten ($10.00) Dollars with W. F. Peters, Engineer, Medina, Ohio, or R. Winthrop Pratt, Consulting Engineer, Hippodrome Bldg., Cleveland, Ohio, which sum will be refunded on the return of plans and specifications within ten (10) days after the contract is awarded, if same are in good condition when returned.

The contract bond will be for fifty (50%) per cent. of the amount of the contract.

Each proposal shall be accompanied by a certified check for ten (10%) per cent. of the amount of proposal, or by a bond with surety or sureties satisfactory to the Village Council.

The Village Council reserves the right to reject any or all bids, waive any informalities in the bids received and to accept any bid which it deems most favorable to the Village of Rittman, Ohio.

By Order of the Village Council.

VANCE HICKIN, Clerk.

Bids received until May 28, 1915.

Invitation to Paving Bidders

Wilmington, Del.

Sealed bids, in either one or two forms or both, will be received by the Board of Directors of the Street and Sewer Department of the City of Wilmington, Delaware, at the office of said Department, S. W. corner Sixth and King Streets, until 4 o'clock P.M. May 28, 1915, for the following work, on streets to be selected by the Street and Sewer Department from list published with the instructions and specifications for such work, which instructions and specifications, together with proposal blanks, may be obtained at the said office.

FORM NO. 1

Will be for the furnishing of labor and materials for all the following items, said items to be considered jointly:

Item 1. Setting new granite curb.
Item 2. Resetting granite curb.
Item 3. Constructing new concrete curb.
Item 4. Constructing concrete and brick gutters.
Item 5. Grading and excavating streets.
Item 6. Constructing concrete foundations.

Prices to be for performing all of the divisions of the work in such amount as is necessary to complete, on one or more streets to be selected by the Street and Sewer Department from said list:

1.	Not less than	5,000	square	yards	of	street surface
2.	"	10,000	"	"	"	"
3.	"	20,000	"	"	"	"
4.	"	30,000	"	"	"	"
5.	"	40,000	"	"	"	"
6.	"	50,000	"	"	"	"
7.	"	75,000	"	"	"	"
8.	"	100,000	"	"	"	"

Bidders may submit prices on any or all of the above quantities.

FORM NO. 2

Will be for the furnishing of labor and materials for all the following items, said items to be considered jointly:

Item 1. Setting new granite curb.
Item 2. Resetting granite curb.
Item 3. Constructing new concrete curb.
Item 4. Constructing concrete and brick gutters.
Item 5. Grading and excavating streets.
Item 6. Constructing concrete foundations.
Item 7. Constructing sheet asphalt pavement, or asphaltic concrete pavement, or Bitulithic pavement, or Warrenite pavement, or vitrified block pavement, or stone block pavement, or creosoted wood block pavement, or portland cement concrete pavement.

Prices to be for performing all of the divisions of the work in such amount as is necessary to complete with one kind of pavement, on one or more streets to be selected by the Street and Sewer Department from said list:

1.	Not less than	5,000	square	yards	of	street surface
2.	"	10,000	"	"	"	"
3.	"	20,000	"	"	"	"
4.	"	30,000	"	"	"	"
5.	"	40,000	"	"	"	"
6.	"	50,000	"	"	"	"
7.	"	75,000	"	"	"	"
8.	"	100,000	"	"	"	"

Bidders may submit prices on any or all of the above quantities.

The bids will be publicly opened at the aforesaid time. The right is reserved to reject any or all bids or to accept any portions of the bids.

BOARD OF DIRECTORS OF THE STREET AND SEWER DEPARTMENT.

Attest:
L. V. CHRISTY, Secretary.

Bids received until May 25, 1915.

Supplies

Toronto, Ontario.

Tenders will be received through registered post only up to noon on Tuesday, May 25th, 1915, for the supply of—

No. 53. Cedar Ties for Lansdowne Avenue Extension, Toronto Civic Railway.
54. 5-Million Gallon Pump, driven by 3-phase Induction Motor, for the Riverdale Pumping Station.

Tenders must be addressed to the Chairman, Board of Control, City Hall, Toronto, and be plainly marked on the outside of envelope as to contents.

Specifications and forms of tender may be obtained at the Works Department, City Hall.

Tenderers must comply strictly with conditions of City By-law as to deposits and sureties as set out in specifications and forms of tender. The lowest or any tender not necessarily accepted.

T. L. CHURCH (Mayor),
Chairman, Board of Control.

Toronto, May 11th, 1915.

Bids received until May 28, 1915.

Notice to Bridge Contractors

Canton, N. Y.

Sealed proposals, endorsed "Proposal for Bridge on Canton-Pierrepont Road," will be received by the Town Board of the Town of Canton, N. Y., at the Office of the Town Clerk in the Village of Canton, N. Y., until 2 P.M. on the 28th day of May, 1915.

The work consists of removing the superstructure of the present bridge over Granis Brook on said Road in such a manner that said bridge can be used again, and placed where directed by the Town Superintendent, and furnishing and erecting the superstructure of a new steel truss bridge of one span of 46 feet, with roadway of 18 feet in width, complete and ready for the concrete floor.

Each proposal must be accompanied by a certified check, or its equivalent, for ten per cent. of the amount of the proposal.

A bond for the whole amount, approved by the Supervisor, must be furnished by the successful bidder.

Specifications may be obtained from the Town Clerk or Supervisor.

The Town Board reserves the right to reject any or all proposals.

C. G. CHANEY, Supervisor.
H. M. BARBER, Town Clerk.
A. H. WILLIAMS, Town Supt.

Dated May 3rd, 1915.

Bids received until May 28, 1915.

Notice to Bridge Contractors

Canton, N. Y.

Sealed proposals, endorsed "Proposal for Morley Bridge," will be received by the Town Board of the Town of Canton, N. Y., at the Office of the Town Clerk in the Village of Canton, N. Y., until 2 P.M. on the 28th day of May, 1915.

The work consists of removing the superstructure of the present bridge over the Grasse River at Morley, and piling it in neat piles where directed by the Town Superintendent, and furnishing and erecting the superstructure of a new steel truss bridge of two spans of 79′ 9″ each, with a roadway of 18 feet in width, and one sidewalk of 5 feet in width, with a concrete floor.

Each proposal must be accompanied by a certified check, or its equivalent, for ten per cent. of the amount of the proposal.

A bond, approved by the Supervisor, must be furnished by the successful bidder.

Plans are on file with the Town Clerk, and specifications may be obtained from him or from the Supervisor.

The Town Board reserves the right to reject any or all proposals.

C. G. CHANEY, Supervisor.
H. M. BARBER, Town Clerk.
A. H. WILLIAMS, Town Supt.

Dated May 3rd, 1915.

Bids received until May 25, 1915.

Electric Generating Sets

Buffalo, N. Y.

Sealed proposals for Gasoline Engine Driven Electric Generating Sets for Troop I Armory, Buffalo, N. Y., will be received by the State Board of Armory Commissioners, c/o State Architect, Capitol, Albany, N. Y., until four o'clock P.M. on Tuesday, May 25, 1915. Proposals shall be enclosed in an envelope furnished by the State Architect sealed and addressed and shall be accompanied by a certified check in the sum of $150.00. The contractor to whom the award is made will be required to furnish surety company bond in the sum of 50% of the amount of contract within thirty (30) days after official notice of award of contract and in accordance with the terms of specification No. 2256. The right is reserved to reject any or all bids. Drawings and specifications may be consulted at the Fourth Brigade Headquarters, 451 Main Street, Buffalo, N. Y.; at the New York office of the Department of Architecture, Room 1224, Woolworth Building and at the Department of Architecture, Capitol, Albany, N. Y. Drawings and specifications and blank forms of proposal may be obtained at the Department of Architecture, Capitol, Albany, N. Y. upon reasonable notice to and in the discretion of the State Architect, Lewis F. Pilcher, Capitol, Albany, N. Y.

STATE ARMORY COMMISSION,
FRANKLIN W. WARD, Secretary,
Capitol, Albany, N. Y.

Bids received until June 9, 1915.

Bridge Substructure

New Gretna, N. J.

Sealed proposals will be received for repairs to the substructure of the Mullica River Bridge at Chestnut Neck, near New Gretna, N. J., according to plans and specifications on file with the Engineers for Atlantic and Burlington Counties. The bids will be received by the Boards of Chosen Freeholders of the Counties of Atlantic and Burlington at the G. A. R. Hall, New York Ave., Atlantic City, New Jersey, at twelve o'clock noon on Wednesday, June 9th, 1915, and opened immediately thereafter.

Plans and specifications can be obtained from A. H. Nelson, Guarantee Trust Building, Atlantic City, N. J., and James Logan, Mount Holly, N. J., by depositing $5.00. This sum will be refunded if plans and specifications are returned in good condition by noon, June 10th, 1915.

The right is reserved to reject any or all bids.

A. H. NELSON,
Atlantic County Engineer.

JOHN K. JOHNSON,
Chairman Atlantic County Bridge Committee.

JAMES LOGAN,
Burlington County Engineer.

JOHN R. LOVELAND,
Chairman Burlington County Bridge Committee.

Bids received until June 1, 1915.

To Bridge Contractors

Lake Charles, La.

Sealed bids will be received until 11 o'clock a.m., Tuesday, June 1, 1915, at the office of the Highway Department, Calcasieu Parish, Lake Charles, La., for the construction of a reinforced concrete arch bridge with a Double Leaf Strauss Trunnion Bascule Span, over the Calcasieu River near Lake Charles.

Each bidder shall file with his bid a sworn statement setting forth the location and description of a similar structure, or structures which he has erected as proof of his ability and experience to undertake the present work.

Bidders shall file with their bids a surety company bond for an amount equal to the total bid, and this bond shall guarantee the execution and completion of the contract if awarded.

Bid, bond and sworn statement shall be enclosed in a sealed envelope bearing the bidder's name and marked: "Bid for Calcasieu River Bridge."

Plans and specifications are on file at the office of the Highway Department, and the office of this paper, and copies of same may be obtained upon payment of ten dollars ($10.00), same to be refunded upon the receipt of a bona fide bid and the return of the plans and specifications.

The Police Jury reserves the right to reject any or all bids.

C. E. HOUSE, Clerk to the Police Jury.

F. H. FRANKLAND, Bridge Engineer.

Bids received until June 7, 1915.

Sewerage System and Sewage Disposal Works

Downingtown, Pa.

Sealed proposals will be received by the Borough Council of Downingtown, Pa., at the Council Chamber, up to 8 o'clock P.M. of the 7th day of June, 1915, for furnishing all the labor, materials and plant, and doing all the work necessary for constructing a sewage disposal works, and all or a portion of a sewerage system.

The work to be done includes seven miles of 8, 10, 12, 15 and 18" sewers, and a complete sewage disposal works.

A certified check for $2000 must accompany each bid. The Borough Council reserves the right to reject any or all bids, to waive any informality in the bids received, or to accept the bid or bids most favorable to the Borough of Downingtown.

Plans may be seen and specifications and forms of proposals obtained from Charles McFadden, Secretary of Council, or at the office of Herbert W. Hatton, Consulting Engineer, 708-9 Equitable Building, Wilmington, Del., after May 20. A full set of blue prints will be sent prepaid to a prospective bidder upon receipt of four dollars, which sum will be returned only to the successful bidder.

CHARLES McFADDEN, Secretary of Council.
HERBERT W. HATTON, Consulting Engineer.

Bids received until June 9, 1915.

Mullica River Bridge

New Gretna, N. J.

Sealed proposals will be received for building a bridge, 742 feet long, composed of creosoted pile trestle approaches, steel trusses and bascule draw span with wood block floor and concrete substructure, over the Mullica River at Chestnut Neck, near New Gretna, N. J., according to plans and specifications on file with the Engineers for Atlantic and Burlington Counties. The bids will be received by the Boards of Chosen Freeholders of the Counties of Atlantic and Burlington at the G. A. R. Hall, New York Ave., Atlantic City, New Jersey, at 12 o'clock noon on Wednesday, June 9th, 1915, and opened immediately thereafter.

Plans and specifications can be obtained from A. H. Nelson, Guarantee Trust Building, Atlantic City, N. J., and James Logan, Mount Holly, N. J., by depositing $5.00. This sum will be refunded if plans and specifications are returned in good condition by 12 o'clock noon, June 10th, 1915.

The right is reserved to reject any or all bids.

A. H. NELSON,
Atlantic County Engineer.

JOHN K. JOHNSON,
Chairman Atlantic County Bridge Committee.

JAMES LOGAN,
Burlington County Engineer.

JOHN R. LOVELAND,
Chairman Burlington County Bridge Committee.

Bids received until June 2, 1915.

Contract 9—Nepaug Reservoir East Dike

Hartford, Conn.

Sealed proposals, addressed to the Board of Water Commissioners of the City of Hartford, for the construction of the East Dike, Nepaug Reservoir, in the Town of Canton, Conn., will be received at the office of the Board, City Hall, Hartford, until 3:00 p.m., Wednesday, June 2, 1915.

This contract comprises the construction of an earth dam 25 feet high and 600 feet long, with concrete core wall, and will require about 1600 cubic yards of trench excavation, 32,000 cubic yards of earth embankment and 1800 cubic yards of concrete masonry.

Plans and specifications may be obtained at the office of the Chief Engineer, Pilgard Building, Hartford, Conn., on deposit of $5.00, which amount will be refunded if the plans and specifications are returned in good order before July 2, 1915. Checks should be made to the order of the Board of Water Commissioners. Specifications used in making a bid will be considered as returned.

A certified check or cashier's check for $2500 must accompany each bid and the successful bidder will be required to furnish bonds in the sum of $25,000.

The right is reserved to reject any or all bids.

BOARD OF WATER COMMISSIONERS,
WALTER S. GARDE, President.
FRED D. BERRY, Secretary.

CALEB MILLS SAVILLE,
Chief Engineer.

Bids received until June 1, 1915.

Filter Plant

Ridgway, Pa.

Sealed proposals will be received by the Secretary of the Town Council of The Borough of Ridgway until 12 o'clock noon, Tuesday, June 1st, 1915, for the construction of an addition to the present filter plant, including in general a sedimentation basin, a clear water basin with two superimposed filter units and a filter building.

Approximate quantities are as follows:

800 cu.yds. excavation
25 cu.yds. plain concrete
300 cu.yds. reinforced concrete.

Work to be completed August 1, 1915.

Certified check for $500, payable to "The Borough of Ridgway" required.

Bond required by successful bidder, $2500.

Plans and specifications are on file in the office of F. W. Ward, Borough Engineer, Room 10, Masonic Temple, Ridgway, Pa.

Bidder must visit site of proposed work before plans or specifications are furnished.

The Borough reserves the right to reject any or all bids.

G. F. GREINER,
Secretary Town Council.

Bids received until June 8, 1915.

Sewage Disposal Plant and Appurtenances

Beaver Falls, Pa.

Sealed bids will be received by the Beaver Falls City Council for the construction of a sewage disposal plant, between the hours of 7:30 P.M. and 8:30 P.M. standard eastern time, June 8, 1915, and the bids will immediately thereafter be publicly opened and read.

The work consists of:

Part 1. Four Imhoff Tanks and Pump House.
Part 2. One Luiquid Chlorine Sterilizing Outfit.
Part 3. One Oil Engine, belt driven Centrifugal Pump.
Part 4. Sludge Drying Beds.
Part 5. Necessary Piping.

Plans and specifications can be secured from the engineer, Leo Hudson, 1210 House Building, Pittsburgh, Pa., upon a deposit of five ($5.00) dollars, said deposit being refunded to the bidder upon the return of said plans and specifications by June 15, 1915, in good condition.

All intending bidders will be required to furnish satisfactory evidences of his or their ability to complete the contract satisfactorily and all intending bidders will be required to show evidences of having satisfactorily performed such of closely similar work in the past.

Bidders may bid upon any part or parts of the contract as listed above.

Each bid must contain a certified check for the sum of $1000.00 guaranteeing the good faith of the bidder in signing the contract should said contract be awarded him.

All bids must be on the proposal blank provided and any change or changes made by the bidder in the printed matter of the proposal blanks will be ignored and the bid considered in terms of the conditions set forth.

All bids must be sealed and handed in person to Dr. W. F. Rayle, during the hour between 7:30 P.M. and 8:30 P.M. on June 8, 1915.

The City Council reserves the right to reject any or all bids or to accept or reject any part or parts of any bid.

JAS. E. McCLURE, Mayor.
W. W. PIPER, Supt., Public Improvements.
DR. W. F. RAYLE, Secy., to Council.

LEO HUDSON, Engineer,
1210 House Building, Pittsburgh, Pa.

Bids received until June 4, 1915.

Highway Work

OFFICE OF THE STATE COMMISSION OF HIGHWAYS.

Albany, N. Y.

Sealed proposals will be received by the undersigned at their office, No. 55 Lancaster Street, Albany, N. Y., at one o'clock p.m. on Friday, the 4th day of June, 1915, for the construction and repair of highways in the following counties:

Albany, 3 highways (3.41; 5.76; 4.20), 2 contracts (resurfacing); Cattaraugus, 1 highway (4.29); Cayuga, 1 contract (broken stone); Chemung, 1 highway (8.98); Dutchess, 1 contract (surface treatment); Essex, 2 highways (3.31; 0.52); Jefferson, 1 highway (4.60); Monroe, 2 highways (8.39; 1.51); Niagara, 1 contract (broken stone); Oneida, 1 highway (7.76), 2 contracts (resurfacing), 1 contract (surface treatment); Orange, 1 highway (6.27); Orleans, 3 highways (2.87; 7.46; 0.17); Oswego, 2 highways (7.75; 5.12), 1 contract (resurfacing); Rensselaer, 1 contract (surface treatment); St. Lawrence, 1 highway (5.66); Schenectady, 1 contract (resurfacing); Schuyler, 2 highways (8.98; 7.60); Seneca, 1 contract (broken stone); Tompkins, 1 highway (7.60); Wayne, 1 contract (broken stone).

Maps, plans, specifications and estimates may be seen and proposal forms obtained at the office of the Commission in Albany, N. Y., and also at the office of the Division Engineers in whose divisions the roads are to be constructed or repaired. The addresses of the Division Engineers and the counties in which they are in charge will be furnished on request.

The especial attention of bidders is called to "Information for Bidders' in the itemized proposal, specifications and contract agreement.

EDWIN DUFFEY, Commissioner.

I. J. Morris, Secretary.

PROPOSALS FOR LEVEE WORK—Mississippi River Commission, 1st & 2d Districts, Room 20, Custom House, Memphis, Tenn., April 27, 1915.—Sealed proposals for constructing about 4,500,000 cubic yards of levee work in the Upper and Lower St. Francis, and White River Levee Districts, will be received at this office until 11 a.m., May 26, 1915, and then publicly opened. Information upon application. E. M. MARKHAM, Maj., Engrs.

Bids received until June 1, 1915.

Proposals to Construct the Superstructure and Substructure and Furnish and Install the Electrical Equipment for West Monroe Street Bridge, Chicago, Ill.

THE UNION STATION COMPANY

Chicago, Ill., May 6, 1915.

Sealed proposals will be received by The Union Station Company until 12:00 A.M., Tuesday, June first, 1915, at 521 West Adams St., Chicago, Ill., for the construction of a trunnion bascule bridge over the south branch of the Chicago River at West Monroe Street, according to plans and specifications on file in the office of the Chief Engineer of The Union Station Company at 521 West Adams St., Chicago, Ill.

Proposals must be made out upon blanks furnished at said office, and be addressed to the undersigned, and must be made separately upon the following items and endorsed as indicated:

1. Proposals for the "Substructure West Monroe Street Bridge," and be accompanied by Three Thousand Dollars ($3,000.00) in money or a certified check for the same amount on some responsible bank located and doing business in the City of Chicago, and made payable to the Chief Engineer of The United Station Company.

A deposit of Fifteen Dollars ($15.00) will be required to insure the safe return of plans and specifications.

2. Proposals for the "Superstructure West Monroe Street Bridge," and be accompanied by Three Thousand Dollars ($3,000.00) as above provided.

A deposit of Thirty Dollars ($30.00) will be required to insure the safe return of plans and specifications.

3. Proposals for "Electrical Equipment West Monroe Street Bridge," and be accompanied by Five Hundred Dollars ($500.00) as above provided.

A deposit of Ten Dollars ($10.00) will be required to insure the safe return of plans and specifications.

No proposal will be considered unless the party offering it shall furnish evidence satisfactory to the Chief Engineer of The Union Station Company of his experience and his ability to perform the work in the time called for in the specifications and that he has the necessary facilities or adequate means to procure such facilities together with sufficient pecuniary resources to fulfill the conditions of the contract and specifications, provided such contract should be awarded to him.

The above work is to be completed under the provisions of an ordinance passed March 23, 1914, and accepted by The Union Station Company September 23, 1914.

Companies or firms bidding will give the individual names as well as the name of the firm with their address.

The Union Station Company reserves the right to reject any or all bids.

THOS. RODD,
Chief Engineer, The Union Station Company.

Bids received until May 21, 1915.

Highway Work

OFFICE OF THE STATE COMMISSION OF HIGHWAYS.

Albany, N. Y.

Sealed proposals will be received by the undersigned at their office, No. 55 Lancaster Street, Albany, N. Y., at 1 o'clock p.m., Friday, the 21st day of May, 1915, for the improvement of Highways in the following counties:

Broome, 3 highways (1.03; 0.41; 0.28); Cattaraugus, 3 highways (5.62; 3.95; 6.88); Delaware, 3 highways (7.69; 11.40; 5.84); Genesee (approx. length 4.49); Greene (approx. length 4.43); Oneida (approx. length 5.73); Ontario, 4 highways (1.38; 1.23; 8.63; 1.53); St. Lawrence, 2 highways (5.07; 3.09); Schenectady (approx. length 3.34); Suffolk (approx. length 10.50); Washington, 2 highways (3.34; 5.96).

Maps, plans, specifications and estimates may be seen and proposal forms obtained at the office of the Commission in Albany, N. Y., and also at the office of the Division Engineers in whose division the road is to be constructed. The addresses of the Division Engineers and the counties in which they are in charge will be furnished on request.

The especial attention of bidders is called to "Information for Bidders" in the itemized proposal, specification and contract agreement.

EDWIN DUFFEY, Commissioner.

I. J. MORRIS, Secretary.

Bids received until June 14, 1915.

Continuation of Construction of Storage Dam

Lock Haven, Pa., May 18, 1915.

Sealed proposals, endorsed "Bids for the Construction of a Portion of Storage Dam No. 1 on McElhattan Run, Wayne Township, Clinton County, Pa.," and addressed to Allen Sterner, Superintendent of Parks and Public Property, Lock Haven, Pa., will be received until 1 o'clock P.M., June 14, 1915, at which time the bids shall be publicly opened and read by the City Council in the City Council Chamber, and the contract awarded by said City Council at a future meeting, unless all bids are rejected. The work for which said proposals shall be made is a continuation of the construction of a Storage Dam, already begun, and embraces the construction of a portion of the dam only, and will require the following approximate quantities:

Concrete (plain and rubble)..about		560	cubic yards
Earth excavation.....	"	10560	" "
Trench "	"	700	" "
Riprap	"	150	square yards
Earth Fill.....	"	150	cubic yards

1 24 inch double disc Gate Valve.
Removing of Stone Crusher Plant, etc.

Specifications, instructions to bidders, blank forms upon which bids must be made, and full plans for the proposed work will be furnished upon application to Allen Sterner, Superintendent of Parks and Public Property, Lock Haven, Pa., upon the deposit of $5.00, which amount will be refunded if the plans and specifications are returned in good order before June 14, 1915. The City Council reserve to themselves the right to reject any or all bids, as they may deem best for the interest of the City.

ALLEN STERNER,
Supt. Parks & Public Property,
Lock Haven, Pa.

H. P. SHOEMAKER, City Engineer.

⁂

FORT HUACHUCA, Ariz., May 8, 1915.—Sealed proposals, in triplicate, will be received here until 1 P.M., June 9, 1915, and then opened, for furnishing all materials, machinery and labor required in constructing complete an electric light and refrigerating plant and installing interior and exterior wiring system. $10 deposit required for plans and specifications. For information address CONSTRG. QUARTERMASTER.

U. S. ENGINEER OFFICE, Wilmington, N. C., Apr. 26, 1915.—Sealed proposals for furnishing and delivering about 22,000 barrels of Portland cement will be received at this office until 12 M., May 26, 1915, and then publicly opened. Information on application. H. W. STICKLE, Maj., Engrs.

U. S. ENGINEER OFFICE, Kansas City, Mo., April 24, 1915.—Sealed proposals for constructing about 1000 feet standard 3-row timber dike, and about 5000 feet standard revetment on Missouri River, about 98 miles below Kansas City, and 6 miles below Waverly, will be received at this office until 12 M., May 24, 1915, and then publicly opened. Information on application. HERBERT DEAKYNE, Lieut.-Col., Engrs.

U. S. ENGINEER OFFICE, Louisville, Ky., May 4, 1915.—Sealed proposals for furnishing and erecting one Mitering Guard Gate of two leaves, for Lock No. 41, Ohio River, will be received here until 12 noon, Central time, June 4, 1915, and then publicly opened. Information on application. J. C. OAKES, Maj., Engrs.

PROPOSALS FOR DREDGING.—U. S. ENGINEER OFFICE, 815 Witherspoon Bldg., Philadelphia, Pa.—Sealed proposals will be received here until 12 NOON, JUNE 21, 1915, and then opened, FOR DREDGING IN DELAWARE RIVER, opposite Port Richmond coal piers, Philadelphia harbor. FURTHER information on application.

U. S. ENGINEER OFFICE, Wheeling, W. Va., May 3, 1915.—Sealed proposals for furnishing and delivering water turbines, air compressors, valve jacks, and gate winches, etc., for Dams Nos. 15 and 19, Ohio River, will be received at this office until 11 a.m. (Eastern time), June 2, 1915, and then publicly opened. Information on application. T. H. JACKSON, Major, Engrs.

U. S. ENGINEER OFFICE, 537 Congress Street, Portland, Me., May 10, 1915.—Sealed proposals for dredging in Portland Harbor, Maine, will be received at this office until 12 M., May 25, 1915, and then publicly opened. Information on application. F. A. POPE, Maj., Engrs.

Bids received until May 31, 1915.

Auxiliary Pumping Unit

PETERBOROUGH UTILITIES COMMISSION,

Peterborough, Ontario.

Sealed Tenders, endorsed "Tender for Pumping Unit," addressed to S. R. Armstrong, Esq., Secretary, Peterborough Utilities Commission, Peterborough, Ont., Canada, will be received until noon of May 31st, 1915, for the construction and installation in place of a complete Pumping Unit.

Tenders must be accompanied by a marked cheque as required by Specification.

Specifications may be obtained from the Secretary; address as above.

WM. KENNEDY, JR., Engineer,
364 University St., Montreal.

⁂

Bids received until June 7, 1915.

Grading and Masonry for a Portion of Section 2, New York Connecting Railroad

Philadelphia, Pa., May 14th, 1915.

Sealed proposals are invited for the construction of the grading and masonry of a portion of Section 2 of the New York Connecting Railroad, extending from a point near Bowery Bay Road to the south side of Fremont Street, in the Borough of Queens, City of New York, a distance of about 4.21 miles. Plans, specifications, form of contract, proposal blanks and instructions to bidders may be had by addressing A. C. SHAND, Chief Engineer, Southern Division, The New York Connecting Railroad Company, Broad Street Station, Philadelphia, Pa.

⁂

U. S. ENGINEER OFFICE, First District, New York City, Room 710 Army Building, 39 Whitehall Street, New York, N. Y., April 28, 1915.—Sealed proposals for constructing and delivering combination drill scow and dredge "General Gillespie" will be received at this office until 12 M., May 28, 1915, and then publicly opened. Information on application. W. M. BLACK, Col., Engrs.

U. S. ENGINEER OFFICE, Wilmington, N. C., Apr. 26, 1915.—Sealed proposals for furnishing and delivering about 19,700 tons of crushed stone will be received at this office until 1 P.M., May 26, 1915, and then publicly opened. Information on application. H. W. STICKLE, Maj., Engrs.

U. S. ENGINEER OFFICE, Kansas City, Mo., April 24, 1915.—Sealed proposals for constructing about 5500 feet standard 3-row timber dike on Missouri River, about 92 and 98 miles below Kansas City, opposite and about 6 miles below Waverly, will be received at this office until 12 M., May 24, 1915, and then publicly opened. Information on application. HERBERT DEAKYNE, Lieut.-Col., Engrs.

U. S. ENGINEER OFFICE, 337 Federal Building, Detroit, Mich., April 8, 1915.—Sealed proposals for construction of concrete masonry for fourth lock at Sault Ste. Marie, Mich., will be received at this office until 12 M., May 24, 1915, and then publicly opened. Information on application. MASON M. PATRICK, Lt.-Col., Engrs.

U. S. ENGINEER OFFICE, Savannah, Ga., April 26, 1915.—Sealed proposals for construction and delivery of two (2) steel lighters will be received at this office until 12 o'clock, Noon (Eastern Standard Time), May 26, 1915, and then publicly opened. Information on application. W. C. LANGFITT, Colonel, Engineers.

FORT SAM HOUSTON, TEX., May 11, 1915.—Sealed proposals, in triplicate, will be received here until 11 A.M., June 4, 1915, for constructing Commanding officers quarters, 2 six-set bachelor officers quarters, barrack, administration building; barrack and stable for pack train. Information upon application to CONSTRUCTING QUARTERMASTER.

U. S. ENGINEER OFFICE, 540 Federal Building, Buffalo, N. Y., May 19, 1915.—Sealed proposals for construction of concrete superstructure on north pier, Erie Harbor, Pa., will be received at this office until 11 a.m., June 19, 1915, and then publicly opened. Information on application. L. V. FRAZIER, Captain, Engineers.

U. S. ENGINEER OFFICE, Newport, R. I., May 17, 1915. Sealed proposals for dredging in the harbor of refuge at Block Island, R. I., will be received here until 12 o'clock, noon, June 16, 1915, and then publicly opened. Information on application. JOHN MILLIS, Col., Engrs.

DEPARTMENT OF THE INTERIOR, U. S. RECLAMATION SERVICE, Washington, D. C., May 14, 1915.—Sealed proposals will be received at the office of the United States Reclamation Service, Provo, Utah, until 2 o'clock P.M., June 16, 1915, for construction involving about 25,000 cubic yards of canal excavation, and about 2,600 cubic yards of reinforced concrete. The work is located near Payson City, Utah, on the San Pedro, Los Angeles and Salt Lake Railroad, and the Tintic Branch of the Denver & Rio Grande Railroad. For particulars address the United States Reclamation Service, Provo, Utah, or Washington, D. C. A. P. DAVIS, Chief Engineer

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U. S. ENGINEER OFFICE, Room 802, Army Building, 39 Whitehall Street, New York City, May 14, 1915.—Sealed Proposals for furnishing and placing rip-rap stone for repair and enlargement of sea wall at south end of U. S. lands at Sandy Hook, N. J., will be received at this office until 12 M., May 29, 1915, and then publicly opened. Information on application. FREDERIC V. ABBOT, Colonel, Engineers.

FORT SILL, OKLA., May 15, 1915.—Sealed proposals in triplicate will be received here until 11 A.M., June 15, 1915, for constructing Quartermaster Corps Barrack, double set engineer's quarters magazine, additions to 4 barrack buildings, 5 stables, repairing 9 double officers quarters, 3 barrack buildings, band barrack, shops and coal houses. Information on application. CONSTRUCTING QUARTERMASTER.

DEPARTMENT OF THE INTERIOR, Washington, D. C., May 13, 1915.—Sealed proposals, in duplicate, will be received at this Department until 2 p.m., Tuesday, June 8, 1915, and then opened, for the furnishing of stokers, coal and ash handling machinery, and other appliances, for the power house of the Government Hospital for the Insane, Anacostia, D. C., in accordance with plans and specifications, copies of which may be obtained upon application to the chief clerk of the Department. The right is reserved to reject any and all bids, or to accept or reject any part thereof in the discretion of the Department. Proposals should be securely enveloped, marked "Proposal for stokers, etc., Government Hospital for the Insane" and addressed to the Secretary of the Interior. BO SWEENEY, Assistant Secretary.

U. S. ENGINEER OFFICE, Newport, R. I., May 12, 1915.—Sealed proposals for rebuilding wharves and building new sea wall and coal house, at U. S. Bureau of Fisheries Station at Woods Hole, Mass., will be received here until 12 o'clock, noon, June 12, 1915, and then publicly opened. Information on application. JOHN MILLIS, Col., Engrs.

PROPOSALS FOR LEVEE WORK—Office of the Secretary, Mississippi River Commission, 1311 International Life Building, St. Louis, Mo.—Sealed proposals will be received here until 11 a.m., June 17, 1915, for constructing about 175,000 cubic yards of earthwork in the East Side Levee and Sanitary District, Ill. Further information on application.

Classified Advertising

Positions Wanted, 3 cents a word, minimum charge 50 cents an insertion, payable in advance.

Positions Open, (Civil Service Examinations), **Employment Agencies** (Labor Bureaus), **Business Opportunities**, **Wanted** (Agents and Salesmen—Contract Work), **Miscellaneous** (Educational—Books), **For Sale**, 5 cents a word, minimum charge $1.00 an insertion.

Count four words for keyed address care of New York; five for Chicago. Abbreviated words or symbols count as full words.

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POSITIONS WANTED

Mechanical and Electrical Engineers

MECHANICAL AND CIVIL GRADUATE, water-supply and sewage disposal; private estates, institutions and towns; five years' experience on examination, design and construction. P. W. 290, Eng. News.

GRADUATE ELECTRICAL AND MECHANICAL ENGINEER with extensive experience in general engineering desires a position of office engineer with engineering corporation or chief engineer of industrial plant. P. W. 78, Eng. News.

Civil Engineers

WATER-SUPPLY, water power, dams, sewers; responsible charge, construction and design; present engagement soon terminates; age 34; Assoc. M. Am. Soc. C. E. P. W. 224, Eng. News.

GRADUATE CIVIL ENGINEER wants work of any kind in the engineering line; five years' experience, land surveys, canal, roads, sewers and street paving. P. W. 265, Eng. News.

CIVIL ENGINEER, Assoc. M. Am. Soc. C. E. desires position; 8 years' experience on the design of foundations and reinforced concrete bridges and buildings. Expert computer of arch stresses. P. W. 264, Eng. News.

CIVIL ENGINEER AND SUPERINTENDENT; 12 years continuous charge of engineering and construction work, mostly railroad; reinforced concrete a specialty; designing, estimating, etc.; experience in municipal work; executive ability; legal training; business education; references; moderate salary; just finished some work in Canada and available at any time for any location. For list of special training and experience. P. W. 260, Eng. News, Chicago.

CIVIL ENGINEER; 28, single, American, technical, railroad location, design and construction, hydro-electric, water works, subways, tunnels, reports and estimates; tropics and north, speak Spanish. P. W. 261, Eng. News.

CIVIL ENGINEER, technical graduate, Member Am. Soc. C. E.; 16 years' experience in construction and design especially waterworks and highways; speaks and writes Spanish; free after June 1. P. W. 267, Eng. News.

CIVIL ENGINEER, graduate, 14 years' practical experience; water-works and municipal consulting engineering; design and construction, earth, masonry, concrete and steel; investigations, reports, appraisals, fire protection; excellent references. P. W. 275, Eng. News.

CIVIL ENGINEERING STUDENT desires temporary work; has completed third year of course; good worker; salary secondary consideration. P. W. 291, Eng. News.

GRADUATE CIVIL ENGINEER, 32, eight years' varied experience, construction and surveying, desires position with engineer, contractor or industrial company in vicinity of New York; moderate salary; have instruments. P. W. 292, Eng. News.

CIVIL ENGINEER AND DRAFTSMAN, technical graduate, nine years' experience. Railway location and construction, designing and detailing reinforced concrete and structural steel. P. W. 299, Eng. News.

CIVIL ENGINEER, graduate, Assoc. M. Am. Soc. C. E., 15 years' experience, responsible charge general construction, railroads and municipal improvements, surveys, expert computer, have instruments. P. W. 284, Eng. News.

FIELD ENGINEER, eight years' experience on railroads, state highways, irrigation and municipal work, desires position anywhere, either location, construction or municipal work. P. W. 294, Eng. News.

Bridge and Structural

STRUCTURAL ENGINEER, graduate, 10 years' experience, designing, detailing bridges, industrial plants, filtration, hydro-electric power. P. W. 285, Eng. News, Chicago.

Surveyors

YOUNG MAN with eight years' experience in surveying, topography and construction desires position with engineer or contractor; hustler. P. W. 274, Eng. News.

I. C. S. STUDENT, age 20, desires position as chainman or rodman with some engineering company in New England. P. W. 295, Eng. News.

Draftsmen

ENGINEER AND DRAFTSMAN, 33, ten years' experience field and office work, estimating, designing and installing, building bridges, reinforced concrete and steel and general construction. P. W. 226, Eng. News.

TOPOGRAPHIC AND RAILROAD DRAFTSMAN, 30, experienced technical graduate, neat, rapid letterer, Reinhardt's style; permanent, responsible position only. P. W. 221, Eng. News, Chicago.

BY ENGINEER with experience in the design and detailing of first-class structural work. P. W. 234, Eng. News.

ENGINEER AND DRAFTSMAN, technical graduate, seven years' experience, field and office, drainage and irrigation work; A-1 letterer, Reinhardt's style; samples. P. W. 216, Eng. News.

DRAFTSMAN, 27; technical; 10 years' experience mechanical, electrical, structural; neat letterer; capable designer. P. W. 278, Eng. News.

STRUCTURAL DRAFTSMAN; M. I. T. graduate; first-class detailer; 2½ years with leading New York firm. Box 85, Barnstable, Mass.

FIRST CLASS DRAFTSMAN and designer, cranes, hoisting engines, shovel work, temporary or permanent. P. W. 287, Eng. News.

Superintendents, Etc.

SUPERINTENDENT, 15 years' experience, reinforced-concrete construction, especially bridges, water filtration, sewage-disposal works, foundation work, desires change from present connections to more responsible position; excellent reasons for changing; references furnished. P. W. 222, Eng. News.

ENGINEERING ASSISTANT experienced in cost accounting, statistical work, correspondence and office management, seeks position. P. W. 270, Eng. News.

MARRIED MAN, 28; eight years' experience railway location, construction and maintenance, needs employment. C. E. Newell, Griffin, Ga.

BY AN ENGINEER, good draftsman, eight years' experience in railroad engineering, rodman to resident engineer. Past two years erection engineer and estimator industrial building construction. Age 28. Married. Residence, P. W. 255, Eng. News, Chicago.

ESTIMATOR, building construction, reliable and quick in quantities, over 10 years' experience, good draftsman, can prepare details on wood and steel, etc., specialist in reinforced concrete, graduated civil engineer, 34, married, wants position; moderate salary. P. W. 253, Eng. News.

POSITION wanted with general contractor; capable office man, stenographer and outside. P. W. 277, Eng. News.

SUBMARINE DIVER, 12 years' experience in bridge work, coffer-dams and general under-water repairs seeks position with reliable contracting firm, permanent or temporary employment. P. W. 276, Eng. News.

GENERAL CONTRACTOR'S ENGINEER and estimator on all trades entering into every class of construction, mostly successful, desires permanent position. P. W. 280, Eng. News.

MINING ENGINEER. The undersigned is open for engagement, is a graduate of School of Mines, Columbia University, has had 23 years experience in mining and mechanical lines; as mine surveyor, engineer and superintendent; as designing, constructing and manufacturing engineer; as instructor and college professor. Edward B. Durham, 2227 Ward St. Berkeley, Calif.

A FIRST CLASS STEAM SHOVEL ENGINEER and master mechanic or walking boss; with 28 years' experience, with all classes of shovels and locomotives can furnish best of references, locality immaterial. P. W. 286, Eng. News.

POSITIONS OPEN

COMPETENT and experienced structural designer and estimator required for mill building work to take permanent position in Havana, Cuba, with manufacturing company. State experience, references and salary. P. 262, Eng. News.

SUPERINTENDENT OF ASPHALT PLANT; in New York City. Only those having had thorough experience in such a capacity need apply. Must be able to handle men, and understand thoroughly the machinery of an asphalt plant. Applicants should furnish a detailed statement or experience, giving age and references. P. 263, Eng. News.

HYDRAULIC DREDGE FOREMAN wanted; must have had long experience in this particular work. Applicants please state age and salary required and give details of experience. P. 217, Eng. News.

SUPERINTENDENT wanted to take charge of foundations for railroad bridge, steel cylinders filled with concrete. State age, experience and salary. Give references. P. 283, Eng. News.

SHOP FOREMAN by a large steel fabricating plant in the Middle West. State experience and salary expected. P. 282, Eng. News, Chicago.

FIRST CLASS FOREMAN for structural steel shop one thousand tons capacity in Havana City, Cuba, must be fully experienced in all departments of shops active and competent to handle Spanish speaking labor permanent position for right man give references, experience and salary expected. P. 288, Eng. News.

Employment Agencies

The Employment Agencies advertising in this paper agree to refund any registration fee on demand any time within the first six months when no position is secured.

TECHNICAL ENGINEERS in every line for available positions; employers and applicants write The Toledo Engineering Agency, Toledo, Ohio.

ATTENTION—HELP—FREE—WHITE—COLORED. Employers free—service. 42 Montgomery St., Jersey City, N. J., Dept. 102, telephone 3746. Occupying entire building, Est. 1892. Forwarder of immigrants and emigrants for all kinds of work all over United States. Labor—shipping-colonization—agency. Advanced expenses to be deducted from wages. Mail all communications to S. S. Schwartz, Prop.

LABOR BUREAUS

SPECIAL ADVANTAGES to contractors or others employing skilled or unskilled laborers. Commissary privileges optional. Central Labor Agency, 139 Mulberry St., New York. (Telephone 8970 Canal.)

LABORERS—Immigrants of any nationalities supplied at short notice at any part of the United States; camps and commissary runner; promptness and systems are our success. People's Labor Agency, 88 Baxter St., New York.

WANTED

AGENTS AND SALESMEN

ENGINEER OR DRAFTSMAN to sell WINSLOW direct-reading, beam and reinforced concrete calculating SLIDE-RULES. Simple, quick. Good opportunity for first agent in each city. Henry W. Tomlinson, 62 East Van Buren St., Chicago.

WANTED ENGINEERING REPRESENTATIVES for Southern and Central States to represent the Thomas method of reinforced-concrete bridge construction. William M. Thomas, 915 Hibernian Bldg., Los Angeles, Calif.

MECHANICAL SALESMAN now covering New York, New Jersey, Pennsylvania, wants negotiations; exclusive or side. W. 271, Eng. News.

SALES ENGINEER with established office would like to represent reputable manufacturer, Chicago and vicinity. W. 289, Eng. News, Chicago.

A TRAVELING SALESMAN to carry excellent side line on commission; to visit city engineers and sewer contractors. W. 293, Eng. News.

BUSINESS OPPORTUNITIES

CONSTRUCTION COMPANY (specializing concrete work), newly incorporated, offers good opportunity to man who can invest at least three thousand dollars ($3000). No triflers. Address Concrete, Room 416, 145 Nassau St., N. Y. C.

To Paving Contractors

You can have your Brick, Wood Block, Granite Block, Belgian Block and Asphalt Block paving done by a well organized paving crew which you can depend upon to do your work right. Especially your top work which is most difficult.

If you wish to sublet the above end of the work, will be glad to quote you.

J. G. Piscitelli, Paving Contractor

750 So. 8th Street, Phila., Pa.

Best of References *Will furnish Bond*

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of instruction and practical work in designing and estimating the cost of structures of steel and reinforced concrete have been prepared by a well known Consulting Engineer.

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The personal attention of the engineer who prepared these courses is given to all the work submitted by each subscriber and therefore the membership is limited.

Two separate courses are offered, under the following designations,—

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These courses are *not* a duplication of the work given in technical colleges on these subjects, and are *not* a re-hash of matter taken from text books. This work differs from either because it gives the short concise practical methods actually used by engineers in such work, supplemented by labor saving tables and diagrams. They

PROVIDE ACTUAL EXPERIENCE

and save years spent in mis-directed efforts which are a necessary result of trying to acquire experience without the direct aid and assistance of an engineer properly experienced in such work.

Address M. 180, Engineering News

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Second Hand Equipment

Rates: Less than 4 insertions 55 cents per line—4 to 11 insertions 50 cents per line—12 or more insertions 45 cents per line.

Equipment Wanted items appear at the end of this list.

N

ADVERTISERS' NAMES are abbreviated in most of these items, Complete names and addresses are as follows:

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CONTRACTORS' Service Co., 50 Church St., N. Y. City.
DALLETT & CO., Harrison Bldg., Phila., Pa.
GIVIN Co., Herbert, 30 Church St., N. Y. City.
GRIMSHAW Co., Wm. B., 688 Drexel Bldg., Phila., Pa.
HITNER'S Sons Co., Henry A., Philadelphia, Pa.
HOISTING Engine Sales Co., 120 West 32d St., New York.

LINES FLYNN Co., Inc., 30 Church St., N. Y. City.
MARINE Metal & Supply Co., 167 South St., N. Y. City.
NEW RIVER Co., The, Macdonald, W. Va.
PIPE & Contractors Supply Co., 3 Dover St., N. Y. City.
SAMPSON Co., Geo. H., 13 Pearl St., Boston, Mass., and 42 B'way, N. Y. C.; or Winston & Co., Brown Station, N. Y.
SCHMIDT, Jr., & Co., C. G. A., Empire Bldg., Phila., Pa.
SOUTHERN Iron & Equipment Co., Atlanta, Ga.
STALLEY, G. T., Box 390, Cleveland, Ohio.
TITAN Equipment Co., 30 Church St., N. Y. (Cort. 1111.)
WHITNEY, O. R., 39 Cortlandt St., N. Y. C. (Cort. 6095).

AIR COMPRESSORS

2—Ingersoll-Rand, Cross Compound steam and air cylinders with Corliss valve gear 2500 cu. ft. capacity.—SAMPSON.

2—Ingersoll-Rand, Cross Compound Steam and Air Cylinders with Corliss valve gear 3300 cu.ft. capacity. Boilers and Condensers with this plant. All in good condition. Bargain.—SAMPSON.

1—4700 Cu. Ft. Rand B. B. 3 Compound Steam and Compound Air Compressor with Condenser.—SAMPSON.

Several second-hand air compressors, steam and belt driven, straight line and two stage of various sizes from 70 to 1300 cu. ft. capacities. Good condition.—SAMPSON.

1—Ingersoll-Rand H-3, 1000 Cu. Ft. Compound Steam Compound.—SAMPSON.

1—WB-2 Sullivan 909 Cu. Ft. Tandem Steam Driven Compound.—SAMPSON.

1—Rand Class "C" 527 Cu. Ft. and 2—Rand Class "C" 98 cu. ft. straight Line steam Driven.—SAMPSON.

1—Imperial XB-2, 1312 Cu. Ft. and 1—Imperial XB-2, 1190 Cu. Ft. Compound Belt Driven.—SAMPSON.

1—Ingersoll-Sergeant Class "E-1" 236 Cu. Ft. Belt Driven. —SAMPSON.

1—Blake 380 Cu. Ft. Duplex Steam Comp.; 1—Ing.-Serg. Class "F" 233 Cu. Ft. Straight Line Steam Driven.—SAMPSON.

1—22x22-13-¼x24, Sullivan, steam driven, class WB 2, straight line, 2 stage, cap., 1160 cu. ft., 1—24x24x30, McKiernan, class A, straight line, steam driven, cap. 1414 cu. ft.; 1—24x24-¼x30, Ingersoll, class A, steam driven, straight line, cap. 1223 cu. ft., 2—16x20-¼x16, Ingersoll-Sargeant, class H-1, duplex, steam driven, cap. 1540 cu. ft.—HITNER'S.

Steam driven 3 Laidlaw-Dunn-Gordon duplex 2-stage, and 5 Norwalk tandem 2-stage, capacities 900 to 2100 cu.ft., condition excellent.—NEW RIVER.

American 10x10x10 straight line, steam driven, cap. 236 cu.ft.; Ingersoll-Rand 8x8x8 straight line, steam driven, cap. 100 cu.ft.; Clayton 8x8x7 duplex, cap. 150 cu.ft.—MARINE.

2 Norwalk 700 cu.ft. and 1200 cu.ft.; excellent condition. Reason for selling, mine worked out. No further use for same.—HANDY BROS. MINING CO., Bay City, Mich.

8x8" Gardner with receiver and gasoline engine on trucks. —GRIMSHAW.

ASPHALT

About 33 tons of Limmer Mastic and 1 ton Neuchatel Asphalt, cheap.—UNION PAVING CO., 30th and Locust Sts., Philadelphia, Pa.

BELT CONVEYORS

1—14" and 1—16" 50' centers.—GIVIN.

BOILERS

5—250 H.P. B. & W., 150 lbs. steam. Horizontal return tubular, 2—72"x20', 1—78"x20', 1—72"x18', 1—72"x15', 1—72"x 14', triple riveted, butt strapped, 125 lbs. steam.—HITNER'S.

35, 60 and 80 H.P. loco. boilers—PIPE.

2 New Marine, 10x11'; prompt delivery.—WHITNEY.

4—125 H.P. and 2—150 H.P. Horizontal return tubulars, butt strapped, triple riveted.—MARINE.

BUCKETS

1—1 yd. Theo. Smith Orange Peel.—PIPE.

5—¾ cu. yd. standard clam shells.—STALLEY.

Hayward 1⅝ yd., Mead & Morrison 1½ yd., Smith 1 yd. and Union Iron Works ¾ yd. clam shells; Hayward 7 cu.ft. orange peel; 10—Steubner 1¼ yd. "Excelsior" bottom dump concrete.—MARINE.

96—42 cu.ft. Stuebner tip-over buckets.—SCHMIDT.

CARS

[Standard Gauge]

Flat car with derrick, 30' boom and bull wheel. House for machinery.—GRIMSHAW.

[24" Gauge]

10—1 yd. swivel end dump cars.—PIPE.

80—36 cu.ft. Koppel "V" body.—SCHMIDT.

12 Koppel 1¼ yd., steel V shape.—GRIMSHAW.

CRUSHERS

Gyratory, Nos. 8, 7½, 6, 5, 4, 3.—GIVIN.

1 Climax Portable plant complete, A1.—GIVIN.

1—18x36 Farrell; 1—24x36 Buchanan.—SCHMIDT.

1 Sturtevant, in perfect condition, used but 10 days; will sell cheap.—ARTHUR L. BATES, Meadville, Pa.

DERRICKS

1 steel stiff leg 70 ft. boom with cast steel bull wheel, capacity 25 tons.—MARINE.

125' boom, 35 ton cap. steel stiff leg with bull wheel; 4-section boom; removal mid-section adds capacity. Mast 75', sills 58', stiff legs spread 68'. High grade for yard or erecting work. Quick sale price.—TITAN.

DREDGES

Hydraulic and dipper. Sale or charter.—GIVIN.

ELECTRIC LIGHTS

For sale at less than half cost. Sixty 300 C.P. D.C. 220 V. Nernst arc lamps, moon globes. In perfect running condition. Can be seen in use in our offices; $4 each. (Regular price, $9.50). Price includes drop lighting switch. Must sell as our voltage is 110 in new office. HILL PUBLISHING CO., 10th Ave. at 36th St., New York.

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1 8 H.P. Vertical Type Fairbanks with sub-base.—SAMPSON

100 HP. Elyria tandem gas engine with air tank and engine; all in good shape; will sell cheap.—THE JACOBS LUMBER CO., Youngstown, Ohio.

EXCAVATORS

½ cu.yd. and up. Traction. Ideal for cellars, trenching, grading.—TITAN.

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Western Electric 100 K.W. dir. con. to 14x14 engine, 240 volts; 2 Western Electric 60 K.W. belt, 125 volts.—MARINE.

FIRE ENGINES

2 Fire Engines, condition, first class.—HITNER'S.

HAMMERS

1 No. 4 Arnott.—PIPE.

HOISTING ENGINES

2—3 drum Nationals, one 10x12 and one 8¼x10, with boilers; Lambert 8½x10 D.D.D.C. Skeleton; 7½x10 D.D.D.C. Skeleton, 15 other makes and sizes.—MARINE.

1 3 drum National hoist 10x12 with boiler and three independent winch-heads, excellent condition; 4 7x10 D.C.D.D. Lidgerwood with boilers; 1 Lidgerwood D.C.D.D. with swinger, skeleton 7x10, and 1 National D.C.D.D. with swinger, skeleton 7x10.—PIPE.

2 Lidgerwood 14x18, D.C. 3-tandem drum, reversible link motion; 1 Lidgerwood, 10x12, D.C. S.D. reversible link motion; 1 Lambert, 10x12, D.C. D.D. with boiler; 2 Lambert, 8x10, D.C. D.D. with Mass. boilers; 1 Lambert 7x10, D.C. D.D. with boiler; 1 Mundy, 7¼x10, D.C. D.D. with boiler; 1 Mundy, 6¼x10, D.C. D.D. with boiler; 1 O. & S. 6¼x8, D.C. D.D. with boiler. 2 Lidgerwood, 60 H.P. D.D. and swinger d.c. hoists.—HITNER'S.

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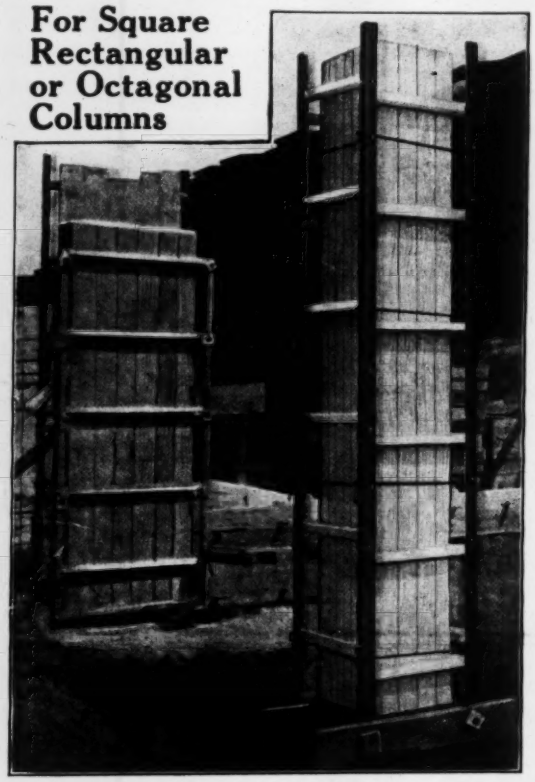

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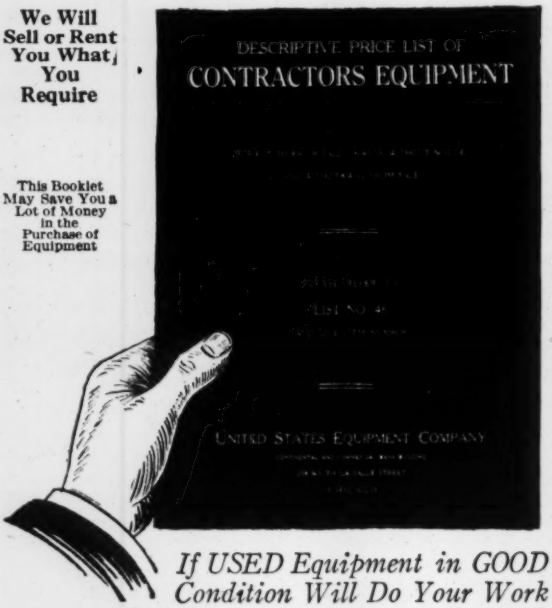

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